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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,947	07/25/2003	Mark Hernandez	MJ-1	2256

7590 10/19/2004  
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EXAMINER

CINTINS, IVARS C

ART UNIT PAPER NUMBER

1724

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/627,947

Applicant(s)

HERNANDEZ ET AL.

Examiner

Ivars C. Cintins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) 27 and 36-70 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 28-35 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

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This application fails to contain a claim identified by the number 28. Therefore, claims 29-71 have been renumbered as claims 28-70, respectively, in accordance with 37 CFR § 1.126.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-26 and 28-35, drawn to a method for removing metal cations from a solution, classified in class 210, subclass 668.
- II. Claim 27, drawn to decontaminated water, classified in class 423, subclass 580.1.
- III. Claims 36-70 drawn to an apparatus for contacting a solution with purifying materials, classified in class 210, subclass 198.1.

The inventions are distinct, each from the other because:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the decontaminated water of Group II could be produced by another process, different from that of Group I. For example, this water could be produced by distillation.

Inventions I and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus of Group III could be used in another process, different from that of Group I. For example, this arrangement could be used to add treatment chemicals to a solution which does not contain metal cations, or to a solution with a basic pH.

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Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Michael Pritzkau on September 30, 2004 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-26 and 28-35. Affirmation of this election must be made by Applicant in replying to this Office action. Claims 27 and 36-70 are withdrawn from further consideration by the examiner, as being directed to non-elected inventions. See 37 CFR § 1.142(b).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 11-13 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The term "as at least one of" (claim 8, line 1) is vague, and indefinite as to the limitation intended. Also, it is not clear why some of the compounds recited in claim 8, and all of the compounds recited in claim 11, have been capitalized. Claims 12 and 13 depend from indefinite claim 11, and are therefore themselves indefinite. Furthermore, the term "selecting is based, at least in part, on said specific pH" (claim 23) is vague, and indefinite as to the limitation intended.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-25 and 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Huang et al. publication entitled "The Removal of Mercury(II) from Dilute Aqueous Solution by Activated Carbon" in view of Correa et al. (U.S. Patent No. 5,112,428). The Huang et al. publication discloses removing metal cations from a solution having an acidic pH by adding a metal coordinating compound and a sorbent of the type recited to the solution (see page 44, left column, last paragraph through page 46, left column, last paragraph). This reference further teaches that the treating agents and solution can be enclosed in a container (see page 38, left column, the paragraph entitled "Preliminary batch experiments"). Accordingly, this primary reference discloses the claimed invention with the exception of the type of metal coordinating (chelating) compound employed. Correa et al. discloses chelating metals with compounds of the type recited (see col. 12, lines 38-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the metal coordinating compound disclosed in Correa et al. for the metal coordinating compound of the Huang et al. publication, since this secondary reference metal coordinating compound is capable of chelating metal ions in a solution in substantially the same manner as the metal coordinating compound of the primary reference, to produce substantially the same results.

Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowed if rewritten in independent form to include all of the limitations of parent claim 1 because the references of record do not teach or fairly suggest a process of the type recited wherein the metal coordinating compound and the sorbent are provided as a dissolvable tablet.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The

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examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached at (571) 272-1166.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Ivars C. Cintins**  
**Primary Examiner**  
**Art Unit 1724**

I. Cintins  
October 16, 2004